

TITLE OF THE INVENTION
A POLYNUCLEOTIDE HERPES VIRUS VACCINE

ABSTRACT OF THE DISCLOSURE

Genes encoding herpes simplex virus type 2 (HSV-2) proteins were cloned into eukaryotic expression vectors to express the encoded proteins in mammalian muscle cells *in vivo*. Animals were immunized by injection of these DNA constructs, termed polynucleotide vaccines or PNV, into their muscles. In a DNA titration, it was found that a single immunization of ≥ 0.5 μ g of (one) PNV, gave $>90\%$ seroconversion by ten weeks post immunization. Immune antisera neutralized both HSV-2 and HSV-1 in cell culture. When animals were challenged with HSV-2, significant ($p < .001$) protection from lethal infection was achieved following PNV vaccination. DNA constructs may be full-length, truncated and/or mutated forms and may be delivered along or in combination in order to optimize immunization and protection from HSV infection.